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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,578	12/03/2003	Lorin Markarian	2993-496US RM/JR/as	3444
32292	7590	04/11/2005	EXAMINER	
OGILVY RENAULT (PWC) 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A 2Y3 CANADA			GARTENBERG, EHUD	
			ART UNIT	PAPER NUMBER
			3746	
DATE MAILED: 04/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/725,578

Applicant(s)

MARKARIAN ET AL.

Examiner

Ehud Gartenberg

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION..

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/3/03, 7/26/04, 2/
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. Figure 1 is objected to because the combustor shown is of the flow-through type, while the combustor shown in Figure 3 is of the reverse flow type. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. Claim 15 is objected to because of the following informalities: on l. 4, "exits" is believed to be an error for -- exists --. Appropriate correction is required.

***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Bobo 3302926 that teaches the invention as disclosed and as claimed, an apparatus and a method of making said apparatus comprising: a combustor 19, an airfoil vane 28, inner 27 and outer 26 platforms, both platforms providing axial sliding joints with radial sealing connections with the adjacent walls 18 of the combustor at engine operating temperature. Regardless of the way that the combustor walls expand or contract, sealing will always be provided either by the outer wall of the groove or the inner wall of the groove, respectively. This "tongue in groove" joint was upstream the leading edge of the airfoil vane, the groove being read on the claimed bifurcated flange, and the outer flange portion and the claimed finger in claim 20 are the radially outward portion attached to wall 18. According to col. 2, ll. 62-67, the void 16 around walls 18 provided cold combustion air through walls 18 to sustain the combustion process. Therefore, the tongue extension of 26 inside the groove was exposed to higher temperatures than the

outer flange attached to wall 18, and therefore differential expansions between the two ensured the formation of a seal in-between. Regarding claims 14 and 16, although Bobo does not teach specifically two different materials having two different coefficients of expansion, it is obvious from col. 4, ll. 1-33 and in particular l. 7 and ll. 14-15, l. 24 et seq., that Bobo did consider these limitations as presently claimed in order to obtain the abutting relationship between the tongue and the groove in his apparatus.

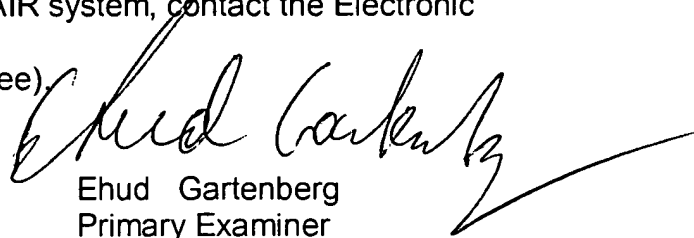
In conclusion, the Examiner notes that the only reason that this rejection was not made a pure 35USC102(b) rejection was the slight difference between the geometries of the claimed invention and Bobo, that do not amount to a different invention, but rather to matter of design choice. It is also noted that Johnson 3286461 could be equally well applied in a rejection under 35 USC102/103, and that Wood 4195476 could be used to reject the claimed invention under 35 USC 103(a), the only difference being the shifting of the groove from the vane side to the combustor side and of the tongue from the vane side to the combustor side (see in particular col. 3, l. 30 et seq. for a discussion of the thermal expansion considerations in the design and operation of the joint). On the other hand, Wood teaches his invention in combination with a reverse flow combustor, as disclosed but not claimed in the present application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ehud Gartenberg whose telephone number is 571 272 4828. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571 272 4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ehud Gartenberg  
Primary Examiner  
Art Unit 3746

04072005